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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,441	03/01/2004	Sang Kyoon Hyun	CISCP854	3445

26541 7590 02/06/2007	EXAMINER	
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P.O. BOX 2448		
SARATOGA, CA 95070	ART UNIT	PAPER NUMBER
	2617	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
	10/791,441	HYUN ET AL.
Office Action Summary	Examiner	Art Unit	
	Huy C. Ho	2617	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis

for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section

122(b), by another filed in the United States before the invention by the applicant for patent or (2)

a patent granted on an application for patent by another filed in the United States before the

invention by the applicant for patent, except that an international application filed under the treaty

defined in section 351(a) shall have the effects for purposes of this subsection of an application

filed in the United States only if the international application designated the United States and

was published under Article 21(2) of such treaty in the English language.

2.   **Claims 1-6, 8-9, 11-13, 17 and 19** are rejected under 35 U.S.C. 102(e) as being anticipate by

Sherman (2003/0161340).

Consider claim 1, Sherman teaches a method for operating a point-to-multipoint wireless

communication network, said method comprising:

measuring link delays between a root bridge and a plurality of non-root bridges (see **figure 1,**

pars [8], [28]-[30], [34]-[35], [37]-[38], [40], [55], [83]);

using said measured link delays to coordinate transmissions in a CSMA/CA scheme ((see **figure**

1, pars [8], [28]-[30], [34]-[35], [37]-[38], [40], [55], [83]);

Consider claim 8, Sherman teaches method for operating a node in a point-to-multipoint wireless

communication network, said method comprising:

receiving a measured link delay and a system slot time from another node (see **figure 1, pars [8],**

[28]-[30], [34]-[35], [37]-[38], [40], [55], [83]);

using said measured link delay and said system slot time to coordinate transmissions in a

CSMA/CA scheme (see **figure 1, pars [8], [28]-[29], [34]-[35], [37]-[38], [40], [55], [83]**).

Consider claim 9, Sherman teaches A method for operating a point-to-multipoint wireless

communication network, said method comprising:

measuring link delays between an access point and a plurality of stations (see **figure 1, pars [8],**

[28]-[30], [34]-[35], [37]-[38], [40], [55], [83]);

using said measured link delays to coordinate transmissions in a CSMA/CA scheme (see **figure**

1, pars [8], [28]-[30], [34]-[35], [37]-[38], [40], [55], [83]).

Consider claim 17, Sherman teaches apparatus for operating a node in a point-to-multipoint

wireless communication network, said apparatus comprising:

a physical layer block that receives a measured link delay and a system slot time from another

node (**pars [28]-[30], [69],)**; and

a MAC layer processor that uses aid measured link delay and said system slot time to coordinate

transmissions in a CSMA/CA scheme (**pars [28]-[30]**).

Consider claim 19, Sherman teaches Apparatus for operating a point-to-multipoint wireless

communication network, said apparatus comprising:

means for measuring link delays between a root bridge and a plurality of non-root bridges (see

figure 1, pars [8], [28]-[30], [34]-[35], [37]-[38], [40], [55], [83]); and

means for using said measured link delays to coordinate transmissions in a CSMA/CA scheme

(see **figure 1, pars [8], [28]-[30], [34]-[35], [37]-[38], [40], [55], [83]**).

Consider claim 2, the method of claim 1, Sherman teaches calculating a common time slot value

based on said measured propagation delays (**[55]-[56], [66], [78], [82], [84]**).

Consider claim 3, Sherman teaches the method of claim 2 wherein using further comprises:

distributing said measured link delays and said common time slot within said point-to-multipoint

wireless communication network ([35]-[36], [38], [55]-[56], [66], [78], [82], [84]).

Consider claim 4, Sherman teaches The method of claim 3 further comprising:

aligning contention timing boundaries based on said measured propagation delays and said

common time slot values (pars [40], [43], [44]).

Consider claim 5, The method of claim 1, Sherman teaches wherein measuring and using are

performed by said root bridge (pars [34]-[35]).

Consider claim 6, The method of claim 1, Sherman teaches wherein measuring and using are

performed by one of said non-root bridges (pars [34]-[35]).

Consider claim 11, The apparatus of claim 10, Sherman teaches wherein said MAC layer

processor calculates a common time slot value based on said measured propagation delays ([55]-[56],

[66], [78], [82], [84]).

Consider claim 12, The apparatus of claim 11, Sherman teaches wherein said MAC layer

processor distributes said measured link delays and said common time slot value within said point-to-

multipoint wireless communication network ([35]-[36], [38], [55]-[56], [66], [78], [82], [84]).

Consider claim 13, The apparatus of claim 12, Sherman teaches wherein said MAC layer

processor aligns contention timing boundaries based on said measured propagation delays and said

common time slot values (pars [40], [43], [44]).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as
set forth in section 102 of this title, if the differences between the subject matter sought to be

patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   This application currently names joint inventors. In considering patentability of the claims under

35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly

owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of

each claim that was not commonly owned at the time a later invention was made in order for the examiner

to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under

35 U.S.C. 103(a).

5.   The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966),

that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are

summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating obviousness or

nonobviousness.

6.   **Claims 10, 14-15, 18 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sherman (2003/0161340) and further in view of **Young et al. (6,990,116).**

        Consider claim 10, Apparatus for operating node in a point-to-multipoint wireless

communication network, said apparatus comprising:

        Sherman teaches MAC processor that uses said measured link delays to coordinate transmissions

in a CSMA/CA scheme **(pars [28]-[30]).**

        Sherman does not disclose a link delay counter that measures delays between a root bridge and

plurality of non-root bridges, however, Sherman describes link time being calculated by using the

controlled contention resource reservation protocol for the optimal serving solution in a WLAN stations

(see pars [8], [29]-[31]). In an analogous art, Young teaches the feature of a link delay counter (see col 6

lines 24-40 and 48-55). Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention was made to modify and incorporate Young teachings into Sherman invention in

order to have the feature of a link delay counter that measures delays between a root bridge and plurality

of non-root bridges.

Consider claim 18, an apparatus for operating a point-to-multipoint wireless communication

network, said apparatus comprising:

Sherman, as modified by Young, teaches a link delay counter that measures link delays between

an access point and plurality of stations (see col 6 lines 24-40 and 48-55); and

Sherman teaches a MAC layer processor that uses said measured link delays to coordinate

transmissions in a CSMA/CA scheme (pars [28]-[30]).

Consider claim 20, Sherman, as modified by Young, teaches a computer program product for

operating a point-to-multipoint wireless communication network, said computer program product

comprising:

code that causes measurement of said link delays between a root bridge and a plurality of non-

root bridges (col 5 lines 5-50, col 9 lines 10-26);

code that causes use of said measured link delays to coordinate transmissions in a CSMA/CA

scheme (col 5 lines 5-50, col 9 lines 10-26); and

a computer-readable storage medium that stores the codes (col 5 lines 5-50, col 9 lines 10-26).

Consider claim 14, Sherman, as modified by Young, further teaches The apparatus of claim 10

wherein said node is said root bridge (pars [34]-[35]).

Consider claim 15, Sherman, as modified by Young, further teaches The apparatus of claim 10

wherein said node is one of said non-root bridges (pars [34]-[35]).

7.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sherman (2003/0161340)** and further in view of **Mahany et al. (6,895,450)**.

Consider claim 7, The method of **claim 1** wherein using comprises:

Sherman fails to teaches assigning transmission deferral times to said non-root bridges based on said measured link delays to give access preference to more distant ones of said non root bridges, however Sherman teaches allocation of bandwidth using the controlled contention/resource reservation protocol along with the usage of the Hybrid Coordinator that transmits/receives frames and initiates controlled contention intervals with station contenders in order to optimize the use of the medium (see the abstract, **pars [8], [37]-[38]**). In an analogous art, Mahany teaches assigning transmission deferral times to said non-root bridges based on said measured link delays to give access preference to more distant ones of said non root bridges (**see col 5 lines 9-24, 50-67, col 6 lines 45-67, col 12 lines 50-60, col 13 lines 17-42**). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify and incorporate Mahany teachings into Sherman invention in order to have the feature of assigning transmission deferral times to said non-root bridges based on said measured link delays to give access preference to more distant ones of said non root bridges.

8.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sherman (2003/0161340)**, in view of **Young et al. (6,990,116)**, and further in view of **Mahany et al. (6,895,450)**.

Consider claim 16, The apparatus of **claim 10**, Sherman, as modified by Young and by Mahany, teaches wherein said MAC layer processor assigns transmission deferral times to said non-root bridges based on said measured link delays to give access preference to more distant ones of said non-root bridges (**see col 5 lines 9-24, 50-67, col 6 lines 45-67, col 12 lines 50-60, col 13 lines 17-42**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy C. Ho whose telephone number is (571) 270-1108. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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